

Opinion of the Court

SAKRAIDA v. AG PRO, INC.

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR
THE FIFTH CIRCUIT

No. 75-110. Argued March 3, 1976—Decided April 20, 1976

Respondent's patent covering a water flush system to remove cow manure from the floor of a dairy barn *held* invalid for obviousness, it being a combination patent all the elements of which are old in the dairy business and were well known before the filing of the patent application. The system's exploitation of the principle of gravity to effect the abrupt release of water "did not produce a 'new or different function' . . . within the test of validity of combination patents." *Anderson's-Black Rock v. Pavement Co.*, 396 U. S. 57, 60. Pp. 274-283.

512 F. 2d 141, reversed.

BRENNAN, J., delivered the opinion for a unanimous Court.

Stephen B. Tatem, Jr., argued the cause for petitioner. With him on the briefs was *James F. Hulse*.

J. Pierre Kolisch argued the cause for respondent. With him on the brief was *John W. Stuart*.*

MR. JUSTICE BRENNAN delivered the opinion of the Court.

Respondent Ag Pro, Inc., filed this action against petitioner Sakraida on October 8, 1968, in the District Court for the Western District of Texas for infringement of United States Letters Patent 3,223,070, entitled "Dairy

**Mary Helen Sears* filed a brief for the Texas Farmers Union as *amicus curiae* urging reversal.

Helen W. Nies, *Donald R. Dunner*, and *David N. Webster* filed a brief for the Bar Association of the District of Columbia as *amicus curiae*.

Establishment," covering a water flush system to remove cow manure from the floor of a dairy barn. The patent was issued December 14, 1965, to Gribble and Bennett, who later assigned it to respondent.

The District Court's initial grant of summary judgment for petitioner was reversed by the Court of Appeals for the Fifth Circuit. 437 F. 2d 99 (1971). After a trial on remand, the District Court again entered a judgment for petitioner. The District Court held that the patent "does not constitute invention, is not patentable, and is not a valid patent, it being a combination patent, all of the elements of which are old in the dairy business, long prior to 1963, and the combination of them as described in the said patent being neither new nor meeting the test of non-obviousness." The Court of Appeals again reversed and held the patent valid. 474 F. 2d 167 (1973). On rehearing, the court remanded "with directions to enter a judgment holding the patent valid, subject, however, to . . . consideration of a motion under Rule 60 (b)(2), F. R. Civ. P., to be filed in the District Court by the [petitioner] Sakraida on the issue of patent validity based on newly discovered evidence." 481 F. 2d 668, 669 (1973). The District Court granted the motion and ordered a new trial. The Court of Appeals again reversed, holding that the grant of the motion was error, because "the record on the motion establishes that [petitioner] failed to exercise due diligence to discover the new evidence prior to entry of the former judgment." 512 F. 2d 141, 142 (1975). The Court of Appeals further held that "[o]ur prior determination of patent validity is reaffirmed." *Id.*, at 144. We granted certiorari. 423 U. S. 891 (1975). We hold that the Court of Appeals erred in holding the patent valid and also in reaffirming its determination of patent validity. We therefore reverse and direct the reinstatement of the Dis-

trict Court's judgment for petitioner, and thus we have no occasion to decide whether the Court of Appeals properly found that petitioner had not established a case for a new trial under Rule 60 (b) (2).

Systems using flowing water to clean animal wastes from barn floors have been familiar on dairy farms since ancient times.¹ The District Court found, and respondent concedes, that none of the 13 elements of the Dairy Establishment combination is new,² and many of those

¹ Among the labors of Hercules is the following:

"Heracles now set out to perform his fifth Labour, and this time his task was to cleanse the stables of Augeas in a single day. Augeas was a rich king of Elis, who had three thousand cattle. At night the cattle always stood in a great court surrounded with walls, close to the king's palace, and as it was quite ten years since the servants had cleaned it out, there was enough refuse in the court to build up a high mountain. Heracles went to Augeas and asked if he would give him the tenth part of his flocks if he thoroughly cleansed his stables in a single day. The king looked upon this as such an absolutely impossible feat that he would not have minded promising his kingdom as a reward for it, so he laughed and said, 'Set to work, we shall not quarrel about the wages,' and he further promised distinctly to give Heracles what he asked, and this he did in the presence of Phyleus, his eldest son, who happened to be there. The next morning Heracles set to work, but even his strong arms would have failed to accomplish the task if they had not been aided by his mother-wit. He compelled a mighty torrent to work for him, but you would hardly guess how he did it. First he opened great gates on two opposite sides of the court, and then he went to the stream, and when he had blocked up its regular course with great stones, he conducted it to the court that required to be cleansed, so that the water streamed in at one end and streamed out at the other, carrying away all the dirt with it. Before evening the stream had done its work and was restored to its usual course." C. Witt, *Classic Mythology* 119-120 (1883).

² The District Court found as follows respecting Claims 1 and 3, the only claims involved in the case:

"1. I find that the 'dairy establishment' as described in United

elements, including storage of the water in tanks or pools, appear in at least six prior patented systems.³ The prior art involved spot delivery of water from tanks or pools

States Letters Patent 3,223,070 is composed of 13 separate items, as follows:

"(a) ' . . . a smooth, evenly contoured, paved surface forming a floor providing a walking surface. . . . '

"(b) ' . . . drain means for draining wash water from such floor opening to the top of the floor. '

"(c) ' . . . said smooth, evenly contoured surface which forms such floor sloping toward said drain. . . . '

"(d) ' . . . multiple rest areas with individual stalls for each cow and with each of said stalls having a bottom which is also a smooth pavement. . . . '

"(e) ' . . . which is disposed at an elevation above the paved surface forming the floor. . . . '

"(f) ' . . . said stalls being dimensioned so that a cow can comfortably stand or lie in the stall, but offal from the cow falls outside the stall bottom and onto the floor providing the walking surface in the barn. . . . '

"(g) ' . . . said barn further including defined feeding areas having feeding troughs. . . . '

"(h) ' . . . a cow-holding area. '

"(i) ' . . . a milking area. '

"(j) ' . . . a transfer area all bottomed with the walking surface forming said floor in the barn. . . . '

"(k) ' . . . and floor washing means for washing the floor providing the walking surface in the barn where said floor bottom, said feeding, holding, milking and transfer areas operable to send wash water flowing over the floor with such water washing any cow offal thereon into the said drain means, said floor washing means including means located over a region of said floor which is uphill from said drain means constructed to collect water as a pool above said floor and operable after such collection of water as a pool to dispense the water as a sheet of water over said floor. '

"(l) A tank on a mounting, so that it can be tilted, and the water poured out to cascade on the floor to form a sheet.

"(m) A floor-washing means comprising a dam for damming or collecting water as a pool directly on the floor, which such dam

[Footnote 3 is on p. 277]

to the barn floor by means of high pressure hoses or pipes. That system required supplemental hand labor, using tractor blades, shovels, and brooms, and cleaning by these methods took several hours. The only claimed inventive feature of the Dairy Establishment combination of old elements is the provision for abrupt release of the water from the tanks or pools directly onto the barn floor, which causes the flow of a sheet of water that washes all animal waste into drains within minutes and requires no supplemental hand labor. As an expert witness for respondent testified concerning the effect of Dairy Establishment's combination: "[W]ater at the bottom has more friction than this water on the top and it keeps moving ahead and as this water keeps moving ahead we get a rolling action of this water which produced the cleaning action. . . . You do not get this in a hose. . . . [U]nless that water is continuously directed toward the cleaning area the cleaning action almost ceases instantaneously. . . ." ⁴

abruptly openable to send water cascading as a sheet over the floor towards the drain.

"2. I further find that each of the items above-described were not new, but had been used in the dairy business prior to the time the application for the said Gribble patent, made the subject of this action, had been filed in the Patent Office of the United States on November 5, 1963."

³ The District Court found:

"[M]any of the items going to make up Plaintiff's claim for a patent were disclosed in prior patents, known respectively as the McCornack patent, the Holz patent, the Ingraham patent, the Kreutzer patent, the Bogert patent, and the Luks patent; and that the statements of the Examiner's opinions refusing to issue a patent are true as to all items there stated to be covered in prior patents or publications."

⁴ This witness further testified:

"[W]ater has energy and it can be used in many different ways. In a hose the energy is used by impact, under pressure, external force

The District Court found that “[n]either the tank which holds the water, nor the means of releasing the water quickly is new, but embrace[s] tanks and doors which have long been known,” and further that “their use in this connection is one that is obvious, and the patent in that respect is lacking in novelty. The patent does not meet the non-obvious requirements of the law.” The District Court therefore held that Dairy Establishment “may be relevant to commercial success, but not to invention,” because the combination “was reasonably obvious to one with ordinary skill in the art.” Moreover, even if the combination filled a “long-felt want and . . . has enjoyed commercial success, those matters, without invention, will not make patentability.” Finally, the District Court concluded: “[T]o those skilled in the art, the use of the old elements in combination was not an invention by the obvious-nonobvious standard. Even

that is applied to this pressure—to this water, whereas the water that comes down as a sheet or wall of water has built in energy because of its elevation and as this water is released it does the same thing water does in a flooded stream. As this water—I will try to make this clear, and I hope I can, on the surface of this pavement there are these piles of manure droppings. This pavement is smooth and this water moves down over this manure. The water at the bottom has more friction than this water on the top and it keeps moving ahead and as this water keeps moving ahead we get a rolling action of this water which produced the cleaning action. That is the key to this method of cleaning. You do not get this in a hose. You do not get it in a gutter as has been used in the past. I might just mention a little bit about the hose. This squirting water on a floor—probably have done it on our own sidewalks or walkways, and I just mention that, that unless that water is continuously directed towards the cleaning area the cleaning action almost ceases instantaneously. Now the movie that was shown earlier very dramatically illustrated that point. The cleaning action—as soon as the hoses moved to one side the cleaning action ceased here and that is why this hose was moved back and forth, to drive this stuff on down to where we want it.”

though the dairy barn in question attains the posture of a successful venture, more than that is needed for invention.”⁵ The Court of Appeals disagreed with the District Court’s conclusion on the crucial issue of obviousness.

It has long been clear that the Constitution requires that there be some “invention” to be entitled to patent protection. *Dann v. Johnston*, ante, p. 219. As we explained in *Hotchkiss v. Greenwood*, 11 How. 248, 267 (1851): “[U]nless more ingenuity and skill . . . were required . . . than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skillful mechanic, not that of the inventor.” This standard was enacted in 1952 by Congress in 35 U. S. C. § 103 “as a codification of judicial precedents . . . with congressional directions that inquiries into the obviousness of the subject matter sought to be patented are a prerequisite to patentability.” *Graham v. John Deere Co.*, 383 U. S. 1, 17 (1966). Section 103 provides:

“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

⁵ The court also concluded that “while the combination of old elements may have performed a useful function, it added nothing to the nature and quality of dairy barns theretofore used.”

The ultimate test of patent validity is one of law, *Great A. & P. Tea Co. v. Supermarket Corp.*, 340 U. S. 147, 155 (1950), but resolution of the obviousness issue necessarily entails several basic factual inquiries, *Graham v. John Deere Co.*, *supra*, at 17.

“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Ibid.*

The Court of Appeals concluded that “the facts presented at trial clearly do not support [the District Court’s] finding of obviousness under the three-pronged *Graham* test” 474 F. 2d, at 172. We disagree and hold that the Court of Appeals erroneously set aside the District Court’s findings.

The scope of the prior art was shown by prior patents, prior art publications, affidavits of people having knowledge of prior flush systems analogous to respondent’s, and the testimony of a dairy operator with 22 years of experience who described flush systems he had seen on visits to dairy farms throughout the country. Our independent examination of that evidence persuades us of its sufficiency to support the District Court’s finding “as a fact that each and all of the component parts of this patent . . . were old and well-known throughout the dairy industry long prior to the date of the filing of the application for the Gribble patent What Mr. Gribble referred to . . . as the essence of the patent, to-wit, the manure flush system, was old, various means for flushing manure from dairy barns having been used long before the filing of the application”⁶ Indeed,

⁶ The court stated:

“I therefore find as a fact that each and all of the component parts of this patent as listed under the applicant’s claims set out

respondent admitted at trial “that the patent is made up of a combination of old elements” and “that all elements are individually old” Accordingly, the District Court properly followed our admonition in *Great A. & P. Tea Co. v. Supermarket Corp.*, *supra*, at 152: “Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. . . . A patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men. . . .”

The Court of Appeals recognized that the patent combined old elements for applying water to a conventional sloped floor in a dairy barn equipped with drains at the bottom of the slope and that the purpose of the storage tank—to accumulate a large volume of water capable of being released in a cascade or surge—was equally conventional. 474 F. 2d, at 169. It concluded, however, that the element lacking in the prior art was any evidence of an arrangement of the old elements to effect the abrupt release of a flow of water to wash animal wastes from the floor of a dairy barn. *Ibid.* Therefore,

in said patent, were old and well-known throughout the dairy industry long prior to the date of the filing of the application for the Gribble patent. I further find that what Mr. Gribble referred to in his deposition as the essence of the patent, to-wit, the manure flush system, was old, various means for flushing manure from dairy barns having been used long before the filing of the application for the Gribble patent, the general idea in that connection being a hard surfaced sloping floor onto which the cows’ offal was dropped, and some system of introducing water in sufficient quantities and force onto said floor to wash the offal therefrom, with a ditch or drain to carry the offal so washed away from the barn, either into a manure container or otherwise.”

“although the [respondent’s] flush system does not embrace a complicated technical improvement, it does achieve a synergistic result through a novel combination.” *Id.*, at 173.

We cannot agree that the combination of these old elements to produce an abrupt release of water directly on the barn floor from storage tanks or pools can properly be characterized as synergistic, that is, “result[ing] in an effect greater than the sum of the several effects taken separately.” *Anderson’s-Black Rock v. Pavement Co.*, 396 U. S. 57, 61 (1969). Rather, this patent simply arranges old elements with each performing the same function it had been known to perform, although perhaps producing a more striking result than in previous combinations. Such combinations are not patentable under standards appropriate for a combination patent. *Great A. & P. Tea Co. v. Supermarket Corp.*, *supra*; *Anderson’s-Black Rock v. Pavement Co.*, *supra*. Under those authorities this assembly of old elements that delivers water directly rather than through pipes or hoses to the barn floor falls under the head of “the work of the skilful mechanic, not that of the inventor.” *Hotchkiss v. Greenwood*, 11 How., at 267. Exploitation of the principle of gravity adds nothing to the sum of useful knowledge where there is no change in the respective functions of the elements of the combination; this particular use of the assembly of old elements would be obvious to any person skilled in the art of mechanical application. See *Dann v. Johnston*, *ante*, at 229–230.

Though doubtless a matter of great convenience, producing a desired result in a cheaper and faster way, and enjoying commercial success, Dairy Establishment “did not produce a ‘new or different function’ . . . within the test of validity of combination patents.” *Anderson’s-Black Rock v. Pavement Co.*, *supra*, at 60. These

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desirable benefits “without invention will not make patentability.” *Great A. & P. Tea Co. v. Supermarket Corp.*, 340 U. S., at 153. See *Dann v. Johnston*, ante, at 230 n. 4.

Reversed.